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EXAMINER				
TRUONG, CAMQUY				
ART UNIT		PAPER NUMBER		
2195				
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05/25/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OFFICEACTIONS@FDML.COM

**Office Action Summary****Application No.**

10/788,802

**Applicant(s)**

SOMOGYI, ALEXANDER J.

**Examiner**

CAMQUY TRUONG

**Art Unit**

2195

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12, 14-15, 17-20, 22, 24, 26-29, 31-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 14-15, 17-20, 22, 24, 26-29, 31-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 12, 14-15, 17-20, 22, 24, 26-29, 31-34 are presented for examination.

Claims 1-11, 13, 16, 21, 23, 25 and 30 have been cancelled.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 34 rejected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following terms lack proper antecedent basis:

- i. the current work – claim 34, line 14.

B. The claim language in the following claim is not clearly understood:

- i. As to claim 33, lines 11-12, it is not clearly indicate whether a "request to access" is performed or not; Line 15, it is not clearly indicated whether a "current transaction" refers to a "call" or a "request" in lines 11-13" and how they are relates to each other; Lines 20 - 22, it is not clear indicate whether "the request" refers to a "request" in line 11, since the "request" in line is "the request to access" and the request in lines 20-22 is the "request to enlist". For examination purpose, Examiner interprets "the request" is the for enlisting request.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3. Claims 12, 14-15, 17-20, 22, 24, 26-29 and 31-32 are rejected under 35 U.S.C. 103 as being unpatentable over Connor (U.S. 6,865,549) in view of Huston et al. (U.S. 2004/0093602 A1) further in view of McLaughlin Jr. (U.S. 7,206, 805 B1), and further in view of Orton et al. (U.S. Patent 5,465,363).**

4. As to claims 12, 22 and 31, Connor teaches the invention substantially as claimed including: a system for interleaving resource enlistment synchronization, comprising:

after the transaction manager receives a request from a thread of the plurality of threads to enlist a resource objects of the plurality of resource objects in a transaction (controller 302 registers with controller service 320 to receive controller ID 304 and lease object 306, col. 10, lines 60-62; col. 5, lines 32-39), the transaction manager

first checks to see if there is a lock being held on the resource object by another thread in another transaction (the system determines if controller 302 holds a lock on the lockable resource (step 504 or the lock can be controlled by different controllers, col. 5, lines 51-53; col. 6, lines 22-25);

if there is a lock , then allows the thread to wait (( if the current lock holder is still valid, controller 302 is not able to proceed with its access to the lockable resource, col. 5, lines 62-64; col. 6, lines 22-25);

if there in no lock, then grants a lock to an accessor associated with the thread (the system causes controller 302 to be noted as the lock owner, col. 5, lines 66-67) and holds the lock until an owner of the thread delists the resource object (col. 5, lines 7-30).

5. Connor does not explicitly teach signal the thread once the lock is freed by the another thread in another transaction. However, Huston teaches allows the thread to wait (thread 2 continues to wait until it determines that bit is set, paragraph 47, lines 23-26) and signal the thread once the lock is freed by the another thread in another transaction (when the thread 1 exit, its passes a s-mutex to next thread, paragraph 47).

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made that to modify the teaching of Connor to incorporate the teaching of signal the thread once the lock is freed by the another thread in another transaction as taught by Huston because this allow to provide an efficient mechanism for serialization, overheads can be reduced and throughput correspondingly increased.

7. Connor and Huston do not explicitly teach an application server with a plurality of threads, running on one or more processors; a transaction manager that manages a

plurality of transactions, wherein each transaction is associated with at least one said thread. However, McLaughlin teaches an application server with a plurality of threads, running on one or more processors (a server is attempting to fork concurrent parallel threads or synchronized processes ..., col. 73, lines 27-30; col. 17, lines 57-61) ; a transaction manager that manages a plurality of transactions (transaction manager coordinates transactions..., col. 19, lines 23-56), wherein each transaction is associated with at least one said thread (managing a complex compound transaction and follows an ACID compliant transaction protocol that separates the subtransactions into distinct threads, col. 17, line 57 – col. 18, line10)..

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made that to modify the teaching of Connor and Huston to incorporate the teaching of application server with a plurality of threads, running on one or more processors; a transaction manager that manages a plurality of transactions, wherein each transaction is associated with at least one said thread as taught by McLaughlin because this allow to dynamically controlling quantum values and reducing transaction overhead.

9. Connor, Huston and McLaughlin do not explicitly teach a plurality of resource objects, wherein each resource object is wrapped with a wrapper object in a collection of wrapper objects, wherein the transaction manager maintains the collection of wrapper objects to manage resource object enlistment request from different said threads

associated with different transactions. However, Orton teaches a plurality of resource objects (non-multitask safe object, col. 16, lines 46-49 ), wherein each resource object is wrapped with a wrapper object (non-multitask-safe object which is "caught" and implemented by the multitask-safe object wrapper, col. 16, lines 46-49; col. 18, lines 20-25 / constructing a first multitasking wrapper object , col. 19, lines 17-19 ), wherein the transaction manager maintains the collection of wrapper objects ( creating a pool of target objects in the first wrapper object ,col. 18, lines 48-53; col. 20, lines 9-10) to manage resource object enlistment request from different said threads associated with different transactions (responsive to the request of application task to access to shared resource, reserve or obtain one of the plurality of target objects, col. 18, lines 27-30; col. 16, lines 55-57).

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made that to modify the teaching of Connor, Huston and Mclaughlin incorporate the teaching of an application server with a plurality of threads, running on one or more processors; one or more resource objects, wherein each resource object is wrapped with a wrapper object, wherein the transaction manager uses the wrapper object to synchronize concurrent enlistment requests as taught by Orton in order to gain the advantage of possible to use objects that are not task-safe in a multitasking environment without modifying or understanding the internal workings of the said objects.

11. As to claims 14, 24 and 32, Orton teaches the collection of wrapper objects is periodically processed to remove objects that are unused or no longer active (once the user quits the running application ... destroying the object, col. 14, lines 34-45).
12. As to claim 15, Orton teaches teach of the one or more resource objects resides in a server node (col. 18, lines 15-26).
13. As to claims 17 and 26, Connor teaches the transaction manager use a priority method to determine which thread will be granted a lock (col. 1, lines 33-40).
14. As to claims 18 and 27, Orton teaches after obtains a lock, the thread uses the wrapper object to initiate work on the resource object (col. 18, lines 21-26).
15. As to claims 19 and 28, Orton teaches the wrapper object receives a delist call from the transaction manager and send an end call to the resource object to end work performed by the resource object associated with the thread and release the lock on the resource object (col. 18, lines 34-42).
16. As to claims 20 and 29, Connor teaches once the transaction manager enlists the resource object and obtains a lock to the resource object, any attempted enlist from a second thread is blocked (col. 6, lines 19-35).



**17. Claims 33 is rejected under 35 U.S.C. 103 as being unpatentable over Connor (U.S. 6,865,549) in view of Huston et al. (U.S. 2004/0093602 A1) further in view of McLaughlin Jr. (U.S. 7,206, 805 B1), and further in view of Orton et al. (U.S. Patent 5,465,363), as applied to claim 22 above, and further in view of Kuftedjian (U.S. 6,105,057).**

18. As to claim 33, Connor, Huston, McLaughlin and Orton do not explicitly teach determining, via the transaction manager, whether an application associated with the thread is a specific type of application; granting, via the transaction manager, the thread a lock only when the application is determined to be the specific type of application. However, Kuftedjian teaches determining, via the transaction manager, whether an application associated with the thread is a specific type of application (col. 5, lines 25-37); granting, via the transaction manager, the thread a lock only when the application is determined to be the specific type of application (col. 8, lines 58-65).

19. It would have been obvious to one of ordinary skill in the art at the time the invention was made that to modify the teaching of Connor, Huston, McLaughlin and Orton to incorporate the teaching of determining, via the transaction manager, whether an application associated with the thread is a specific type of application; granting, via the transaction manager, the thread a lock only when the application is determined to be the specific type of application as taught by Kuftedjian because this allow grant the lock

to application base on the type of application; thereby, improving the system's performance.

**20. Claim 34 is rejected under 35 U.S.C. 103 as being unpatentable over Connor (U.S. 6,865,549) in view of Freund (U.S. 5,095, 421) and further in view of McLaughlin Jr. (U.S. 7,206, 805 B1).**

21. As to claim 34, Connor teaches a system for interleaving resource enlistment synchronization, comprising:

wherein, after the transaction manager receives the call from the resource connection object (system receives the request from controller, col. 5, lines 45-50), the transaction manager

first checks to see if there is an in-progress enlistment of the at least one resource object by another thread in another transaction ( if the current lock holder is still valid, col. 5, lines 61-62),

if there is a lock, blocks the request to enlist the resource object in the transaction and prevent different transactions enlisted with a logical connection to the at least one resource object at same time ( if the current lock holder is still valid, controller 302 is not able to proceed with its access to the lockable resource, col. 5, lines 62-64; col. 6, lines 22-25),

if there is no lock, enlists the at least one resource object in the transaction and signals the at least one resource object to begin processing the

request ( the system causes controller to be noted as the lock owner to perform the requested operation on the lockable resource, col. 5, line 66 – col. 6, line 3).

22. Connor does not explicitly teach at least one resource object, wherein the at least one resource object is associated with a resource connection object; a transaction manager that manages a plurality of transactions, wherein the transaction manager maintains an enlistment data structure to manage resource object enlistment for the plurality of transactions, and wherein the enlistment data structure maintains a mapping between the one or more resource objects and the plurality of transactions;

wherein the resource connection object

receiving a request, to access the at least one resource object that is associated with the resource connection object, from a first application that runs on the first thread ; placing a call to the transaction manager and informing the transaction manager that current work performed by the at least one resource object is to be associated with a current transaction .

23. However, Freund at least one resource object, wherein the at least one resource object is associated with a resource connection object ( communication interface are accessing resources 42 and 44, col. 3, lines 35-38 and lines 45-51 / resource interface, col. 3, lines 42-44);

a transaction manager that manages a plurality of transactions( the transaction govern the operation of the particular transaction...isolates the operations ( begin-

transaction, commit transaction, abort transaction) implemented by the resource..., col. 4, lines 4-25), wherein the transaction manager maintains an enlistment data structure to manage resource object enlistment for the plurality of transactions, and wherein the enlistment data structure maintains a mapping between the one or more resource objects and the plurality of transactions (each participating resource is then recorded on the log, maintained by the transaction manager, and is designated as corresponding to a particular transaction (group of plurality of operation transactions), col. 4, lines 51-65;

wherein the resource connection object

receiving a request, to access the at least one resource object that is associated with the resource connection object, from a first application that runs on the first thread (col. 3, lines 55-65),

placing a call to the transaction manager and informing the transaction manager that current work performed by the at least one resource object is to be associated with a current transaction (each contacted resource informs the transaction manager that they are participating in the transaction, col. 4, lines 51-53).

24. It would have been obvious to one of ordinary skill in the art at the time the invention was made that to modify the teaching of Connor to incorporate the teaching of at least one resource object, wherein the at least one resource object is associated with a resource connection object; a transaction manager that manages a plurality of

transactions, wherein the transaction manager maintains an enlistment data structure to manage resource object enlistment for the plurality of transactions, and wherein the enlistment data structure maintains a mapping between the one or more resource objects and the plurality of transactions; wherein the resource connection object receiving a request, to access the at least one resource object that is associated with the resource connection object, from a first application that runs on the first thread ; placing a call to the transaction manager and informing the transaction manager that current work performed by the at least one resource object is to be associated with a current transaction as taught by Freund because this allow to increase the efficiency of operation.

25. Connor and Freund do not explicitly teach an application server with a plurality of threads, running on one or more processors and each transaction is associated with at least one said thread. However, McLaughlin an application server with a plurality of threads, running on one or more processors (a server is attempting to fork concurrent parallel threads or synchronized processes ..., col. 73, lines 27-30; col. 17, lines 57-61) ; a transaction manager that manages a plurality of transactions (transaction manager coordinates transactions..., col. 19, lines 23-56), wherein each transaction is associated with at least one said thread (managing a complex compound transaction and follows an ACID compliant transaction protocol that separates the subtransactions into distinct threads, col. 17, line 57 – col. 18, line10).

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made that to modify the teaching of Connor and Freund to incorporate the teaching of application server with a plurality of threads, running on one or more processors; a transaction manager that manages a plurality of transactions, wherein each transaction is associated with at least one said thread as taught by McLaughlin because this allow to dynamically controlling quantum values and reducing transaction overhead.

***Response to the argument***

27. Applicant's arguments filed 3/3/2010 for claims 12, 14-15, 17-20, 22, 24, 26-29, 31-34 have been considered but are moot in view of the new ground(s) rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMQUY TRUONG whose telephone number is (571)272-3773. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Camquy Truong/

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